

REMARKS

This amendment is filed in response to the Office action dated October 29, 2007. Claims 3, 9-18, 25 and 31-38 are canceled. By this amendment, claims 1, 4-8, 19-21, 23-24 and 26-30 are currently amended. Claim 22 is previously presented. Claims 1-2, 4-8, 19-24 and 26-30 are now pending and at issue in this application. Applicants respectfully request reconsideration of the claims and favorable action in this case.

Claim amendments and specification support:

Claims 1-8 and 18-30 were rejected under 35 U.S.C. §102(e) as being anticipated by Yeager, et. al. (U.S. Patent Application Publication 2003/0070070 A1), hereinafter referred to as “Yeager”. Accordingly, the claims are amended to more distinctly point out the present novelty and to distinguish it over Yeager.

Independent claims 1, 19, and 23 are amended to specifically disclose a method of using a peer-to-peer type resolution to enable a secured, hierarchical lookup between connected devices. Support for the amendments to the preamble may be found in the following references of the specification: title, [0001], [0007], [0009], [0051] and Figure 4.

Independent claims 1, 19 and 23 are amended to disclose the elements of (summarily): generating a first and next cryptographic keys associated respectively with a first and a next higher-level namespace, creating a first and a next higher-level authority from their respective cryptographic keys, and publishing a peer-to-peer type resolution that resolves a name to the first authority, where the name includes the next higher-level authority and the first namespace, and where the resolution is signed with the cryptographic key of the next higher-level authority. Support for these amendments may be found in [0052], [0057], [0059], [0063], [0064] and Figure 4.

Dependent claims 4-8, 20-21, 24 and 26-30 are amended to properly reflect the amendments to their respective independent claims.

Dependent claims 4-6, 20 and 26-27 are amended to disclose (summarily) publishing another level in the hierarchy of look-ups when a lower-level namespace corresponds to a service, or if an address of a lower-level namespace changes. Support for these amendments may be found in [0064], [0067]-[0069] and Figure 4.

Dependent claims 8 and 30 are amended to define creating the next higher-level authority using the same method as used for creating the first authority. No new method is added; the originally disclosed method is merely applied to creating another authority.

Finally, claims 23-24 and 26-30 are amended to “a computer-readable storage medium” to further provide tangibility. Support for this amendment may be found in [0021].

Response to Rejections of Claims at Issue:

Claims 1, 19 and 23 disclose a method, a method of generating a data structure, and a computer-readable storage medium that tangibly embodies a program of instruction for providing lookups that use peer-to-peer type resolutions with DNS hierarchical lookups and SPKI type certifications. Rather than having a name resolve to an endpoint or address as in a Peer Name Resolution Protocol (PNRP) and DNS, however, the name resolution technique of the present application enables resolution to either an authority of a different domain level, an address, or a set of address, port name and protocol. Namespaces can include names with delegated authorities by creating an authority that is referred to without the administrative burden of DNS because the actual addresses of the delegated authorities are not required to be known to perform a lookup. The name resolution protocol thus may use more than one level of indirection to resolve names.

For clarity and readability, the following remarks are directed to the language in independent claim 1, however, the arguments also apply to claims 19 and 23.

Yeager is directed to providing a decentralized, distributed trust mechanism that may be used in peer-to-peer platforms (Yeager, abstract). Yeager provides methods and protocols for disseminating and updating trust relationships between peers (Yeager [0014]).

Yeager does not disclose the third and fourth elements of amended claim 1: “generating one or more next cryptographic keys associated with a next higher-level namespace, the next higher level-namespace at a higher level domain than the first namespace” and “creating a next higher-level authority using on of the one or more next cryptographic keys.” Yeager [0017] [0019] and [0164] do discuss generating keys, however, Yeager does not disclose domains and the relationship of the levels of domains associated with the generated first and next cryptographic keys. Hierarchical namespaces are not discussed by Yeager.

Yeager also does not disclose the last element of amended claim 1: “publishing, using the peer-to-peer type resolution, an association between the first and the next higher-level namespaces, the association comprising: a signed resolution that resolves a name to the first authority, the signed resolution signed with the one of the one or more next cryptographic keys and the name including the next higher-level authority and the first namespace.”

Yeager’s peer-to-peer type resolution uses the standard peer-to-peer (P2P) type resolution of a name to an endpoint or address, as shown in Yeager [0326]: “The peer resolver protocol may ensure that messages are sent to the correct addresses and peer groups.” Yeager [0234] also illustrates a standard P2P type resolution: “Each published interface may be advertised as a peer endpoint. In one embodiment, a peer endpoint is an identifier (e.g. a URN or URI) that uniquely identifies a peer network interface. Peer endpoints may be used by peers to establish direct point-to-point connection between two peers.” Furthermore, as Yeager does not address hierarchical namespaces, Yeager’s “names” [0152] and [0162] do not take the form of the next higher-level authority and the first namespace, where the domain of the next higher-level namespace is higher than the first namespace.

Yeager does not disclose the resolution of a name to a first authority, where the first authority is created using a cryptographic key, the resolution is signed with the next cryptographic key, and the name includes the next higher-level authority and the first namespace. This makes sense as Yeager is directed to solving the problem of providing a trust model in a decentralized network, and not to solving the problem of providing secure,

hierarchical namespaces. The use of a standard P2P type resolution is sufficient for addressing the problem that Yeager is trying to solve.

The present application, however, provides benefit over Yeager as it builds upon a standard peer-to-peer type resolution to expand its ability to resolve beyond a peer endpoint. By providing the publishing of resolutions to *authorities* (i.e., a cryptographic hash of the public key of a namespace), the present application provides a simpler way of administration when machines change by delegating authority using another resolution. The administrative burden of keeping and maintaining primary/secondary server records is moot. Administrators of various domain levels no longer need to update configurations and DNS caches, nor do they need to propagate these changes to others. Yeager uses a standard P2P type resolution, thus retaining the burdensome administrative tasks when machines change.

As Yeager does not disclose the third, fourth and last elements of amended claim 1, Yeager does not anticipate amended claim 1 under 35 U.S.C. §102(e). (See MPEP §2131, “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).”) Furthermore, 35 U.S.C. §112, ¶4 states “A claim in dependent form … specif[ies] a further limitation … [and] shall be construed to incorporate by reference all the limitations of the claim to which it refers.” As the dependent claims of amended claim 1 incorporate by reference all elements of amended claim 1, Yeager also does not anticipate the dependent claims of amended claim 1. These arguments similarly apply to amended independent claims 19 and 23 and their dependent claims.

Based on the above discussion, the Applicants submit that amended claims 1-2, 4-8, 19-24 and 26-30 are not anticipated by Yeager under 35 U.S.C. §102(e) and are in a condition for allowance.

CONCLUSION

In view of the above amendments and arguments, the Applicants submit that claims 1-2, 4-8, 19-24 and 26-30 of the pending application are in condition for allowance and an early action so indicating is respectfully requested.

If the Examiner has any questions, the Examiner is encouraged to call the undersigned at (312) 474-6300. Applicants believe no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 13-2855, under Order No. **30835/303114** from which the undersigned is authorized to draw.

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Respectfully submitted,

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